certificate of approval is based. Applicants shall keep exact duplicates of the drawings, specifications, and descriptions that relate to equipment which has received a certificate of approval, and these are to be adhered to exactly in production of the certified equipment.

(c) A certificate of approval will be accompanied by an appropriate caution statement specifying the conditions to be observed for operating and maintaining the equipment and to preserve its permissible status.

§ 36.11 Approval plates.

(a) A certificate of approval will be accompanied by a photograph of an approval plate, bearing the emblem of the Mine Safety and Health Administration and spaces for the approval number, the type, the serial number, and ventilation requirement; the name of the complete assembly; and the name of the applicant.

(b) The applicant shall reproduce the design as a separate plate, which shall be attached, in a suitable place, on each complete assembly to which it relates. The size, type, and method of attaching and location of an approval plate are subject to MSHA's approval. The method of affixing the approval plate shall not impair the permissibility (explosion-proof) features of the complete assembly of mobile diesel-powered transportation equipment.

(c) The approval plate identifies the equipment, to which it is attached, as permissible and is the applicant's guarantee that the equipment complies with the requirements of this part. Without an approval plate no equipment is considered permissible under the provisions of this part.

(d) Use of the approval plate obligates the applicant to whom the certificate of approval was granted to maintain in his plant the quality of each complete assembly bearing it and guarantees that it is manufactured and assembled according to the drawings, specifications, and descriptions upon which a certificate of approval was based.

[Sched. 31, 26 FR 645, Jan. 24, 1961, as amended at 43 FR 12318, Mar. 24, 1978]

§ 36.12 Changes after certification.

If an applicant desires to change any feature of certified equipment, he shall first obtain MSHA's approval of the change, pursuant to the following procedure:

(a) Application shall be made as for an original certificate of approval, requesting that the existing certification be extended to cover the proposed changes and shall be accompanied by drawings, specifications, and related data, showing the changes in detail.

(b) The application will be examined by MSHA to determine whether inspection and testing of the modified equipment or component or subassembly will be required. Testing will be necessary if there is a possibility that the modification may affect adversely the performance of the equipment. MSHA will inform the applicant whether such testing is required and the component, subassembly, and related material to be submitted for that purpose.

(c) If the proposed modification meets the requirements of this part, a formal extension of certification will be issued, accompanied by a list of new and corrected drawings and specifications to be added to those already on file as the basis for the extension of certification.

[Schedule 31, 26 FR 645, Jan. 24, 1961, as amended at 52 FR 17516, May 8, 1987]

§ 36.13 Withdrawal of certification.

MSHA reserves the right to rescind for cause any certificate of approval granted under this part.

Subpart B—Construction and Design Requirements

§ 36.20 Quality of material, workmanship, and design.

(a) MSHA will test only equipment that in the opinion of its qualified representatives is constructed of suitable materials, is of good quality workmanship, based on sound engineering principles, and is safe for its intended use. Since all possible designs, arrangements, or combinations of components and materials cannot be foreseen, MSHA reserves the right to modify the construction and design requirements of subassemblies or components and

tests thereof to obtain the same degree of protection as provided by the tests described in Subpart C of this part.

(b) The quality of material, workmanship, and design shall conform to the requirements of §7.98(q) of this chapter.

(c) Power packages approved under part 7, subpart F of this chapter are considered to be acceptable for use in equipment submitted for approval under this part. Sections 36.21 through 36.26 (except §36.25(f)) and §§36.43 through 36.48 are not applicable to equipment utilizing part 7, subpart F power packages, since these requirements have already been satisfied.

[Sched. 31, 26 FR 645, Jan. 24, 1961, as amended at 61 FR 55526, Oct. 25, 1996]

§36.21 Engine for equipment considered for certification.

Only equipment powered by a compression-ignition (diesel) engine and burning diesel fuel will be considered for approval and certification. The starting mechanism shall be actuated pneumatically, hydraulically, or by other methods acceptable to MSHA. Electric starting shall not be accepted. Engines burning other fuels or utilizing volatile fuel starting aids will not be investigated.

[Sched. 31, 26 FR 645, Jan. 24, 1961, as amended at 61 FR 55526, Oct. 25, 1996]

§36.22 Fuel-injection system.

This system shall be so constructed that the quantity of fuel injected can be controlled at a desired maximum value and shall be so arranged that this adjustment can be changed only after breaking a seal or unlocking a compartment. Provision shall be made for convenient adjustment of the maximum fuel-injection rate to that required for safe operation at different altitudes (elevations above sea level). The governor, controlling engine speed and fuel injection, shall not directly affect airflow to the engine and provision shall be made to seal or lock its adjustment compartment. Filters shall be provided to insure that only clean fuel will reach the injection pump or injectors.

§36.23 Engine intake system.

(a) *Construction.* The intake system (exclusive of the air cleaner) shall be designed to withstand an internal pressure equal to 4 times the maximum pressure observed in explosion tests, which are described in §36.46, or a pressure of 125 pounds per square inch, whichever is the lesser. Joints in the intake system shall be formed by metal flanges fitted with metal or metal-clad gaskets, positively positioned by through bolts or other suitable means for secure assembly, or shall meet the requirements for flanged metal-to-metal flame-proof joints as required in §36.20(b). Either type of joint shall withstand repeated explosions within the intake system without permanent deformation and shall prevent the propagation of flame through the joint into a surrounding flammable mixture.

(b) *Intake flame arrester.* (1) The intake system shall include a flame arrester that will prevent an explosion within the system from propagating to a surrounding flammable mixture. This flame arrester shall be between the air cleaner and the intake manifold and shall be attached so that it may be removed for inspecting, cleaning, or repairing. Its construction shall be such that it may be cleaned readily. The flame arrester shall be of rugged construction to withstand the effects of repeated explosions within the intake system, and the material of construction shall resist deterioration in service. It shall be so mounted in the equipment assembly that it is protected from accidental external damage.

(2) The parts of any flame arrester shall be positively positioned to produce a flame path that will arrest the propagation of an explosion and shall be so designed that improper assembly is impossible. In flame arresters of the spaced-plate type, the thickness of the plates shall be at least 0.125 inch; spacing between the plates shall not exceed 0.018 inch; and the plates forming the flame path shall be at least 1 inch wide. The unsupported length of the plates shall be short enough that deformation during the explosion tests shall not exceed 0.002 inch. Corrosion-resistant metal shall be used to construct flame arresters.